REMARKS

This Amendment is responsive to the Office Action of 10/29/2008. Reconsideration and allowance of claims 2, 4, 6, 7, 9, 11-13, and 15-21 are requested.

The Office Action

Claims 2, 4, 5, 9, 11, 12, 15, 18, and 20 stand rejected under 35 U.S.C. §103(a) over Dewaele (U.S. Patent No. 7,065,235) in view of Ema, et al. (U.S. Patent No. 5,779,634).

Claims 6, 13, 15-17, and 19-21 stand rejected under 35 U.S.C. §103(a) over Dewaele, in view of Ema, in further view of Hochman (U.S. Published Application No. 2003/0236458).

Claim 7 stands rejected under 35 U.S.C. §103(a) over Dewaele, in view of Ema, in further view of Washburn, et al. (U.S. Patent No. 6,379,306).

Claims 2 and 4-7 stand rejected under 35 U.S.C. §112, second paragraph.

Claims 9, 11-13, and 15-21 stand rejected under 35 U.S.C. §101.

Amendments to the Drawings

Amendments to the drawings were submitted with the Applicant's communication of 10/22/2007. An indication of acceptability of all the drawings is earnestly solicited, as one was not provided with the latest Office Action.

The Present Application

The present application is directed to following the progress of a patient's treatment over time using diagnostic imaging. A baseline scan of the patient is taken that contains a region of interest. The user identifies the region of interest in the image. Parameters are then extracted from the image data to aid in identifying the same region in subsequent images, or in already existing images. Once the region of interest has been identified in the baseline and stored images, information is compiled about the images for the user to use. For instance, a region of interest that includes a tumor could be identified in a baseline image. The system could then take that image, extract parameters from it, and look for those parameters in prior existing images of the patient, or subsequent images that also contained the region. Reports are

formatted for the user to aid in visualization of the region and/or diagnosis and treatment.

The References of Record

In **Dewaele**, at col. 10, ll. 4-64, a radiologist compares a radiographic image of a current patient with previously recorded reference images of other subjects. Each reference image is in one of a series of reference stages. Dewaele displays the series of reference images in a row in order by stage. A similar set of reference images in progressive stages can be displayed concurrently in a column. By comparing the appropriate region of the current image with the displayed reference images, the radiologist determines the closest match which gives the appropriate score for the current image. Each current image region can be appropriately enhanced and compared with each of several series of reference images and an individual score is determined for each series. Dewaele has appropriate tools to optimize the visual matching, e.g. zooming, a contrast enhancement, etc., as well as a summation device for summing the individual scores into a total score.

The Claims Distinguish Patentably
Over the References of Record

Claim 2 now calls for a parameter extraction processor for extracting like parameter values from a selected region of interest of a baseline image or its underlying data and at least one diagnostic image or its underlying data. Further, the baseline and diagnostic images are images of the **same** subject. Thus, the progression of treatment or disease in a single patient is tracked. By contrast, Dewaele compares the current patient image with a series of standardized reference images from **other** subjects. In order to get meaningful scores from patient to patient, it is submitted that each reference image represents a defined extent or degree of severity of the condition (col. 1, ll 10-39). The set of standardized reference images might be selected based on age, race, gender, etc. (col. 9, ll. 7-14).

Also, claim 2 calls for the region of interest to be selected on the current image. This enables the present system to search earlier images of the subject, including those that pre-date recognition of the disease. In Dewaele, the region of interest and characteristics of each region of interest displayed are driven by the

reference images. For a good visual comparison, the current patient image must be of the same region of interest, from the same angle, or of the same slice, with the same contrast, etc. Ema was not cited to address this shortcoming of Dewaele and, indeed, does not cure this shortcoming. It is therefore respectfully submitted that **claim 2** and **claims 4, 6,** and **7** dependent therefrom now distinguish patentably and unobviously over the references of record.

Claim 9 calls for generating and later searching diagnostic image representations including a selected region of interest of a subject at different dates. By contrast, Dewaele performs its comparisons against standardized reference images, each corresponding to a potential score and from other subjects to determine a score for the image of the current subject. Ema was not cited to address this shortcoming of Dewaele and, indeed, does not cure this shortcoming. It is therefore respectfully submitted that **claim 9** and **claims 11-13** and **15-17** dependent therefrom distinguish patentably and unobviously over the references of record.

Similarly, **claim 18** calls for creating a first image representation of a subject, then creating at least one other image representation of the portion of the subject on a subsequent date. The comparison is subject specific, as opposed to assigning a globally applicable "score." It is therefore respectfully submitted that **claim 18** and **claims 19-21** dependent therefrom distinguish patentably and unobviously over the references of record.

35 U.S.C. §101

Claims 9 and 18 have been amended to tie the method to an apparatus, e.g. a diagnostic imaging apparatus, a database, a monitor, etc.

35 U.S.C. §112

Claims 2 and 4 have been carefully amended to address the antecedent basis issues raised by the Examiner.
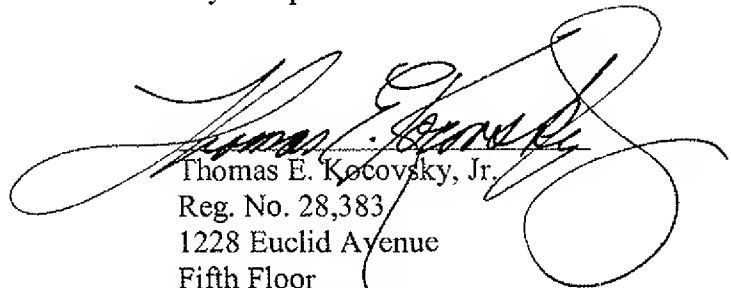
CONCLUSION

For the reasons set forth above, it is submitted that claims 2, 4, 6, 7, 9, 11-13, and 15-21 distinguish patentably over the references of record and meet all statutory requirements. An early allowance of all claims is requested.

In the event the Examiner considers personal contact advantageous to the disposition of this case, he is requested to telephone Tom Kocovsky at (216) 363-9000.

Respectfully submitted,

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